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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/780,375	02/12/2001	Christoph Hauger	00014	7035
7590	09/08/2004		EXAMINER	
Walter Ottesen Patent Attorney P.O. Box 4026 Gaithersburg, MD 20885-4026			FINEMAN, LEE A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/780,375	Applicant(s) HAUGER ET AL.	
	Examiner Lee Fineman	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,8,9 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8,9 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/12/01 & 10/6/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 June 2004 has been entered, in which claims 1 and 12 were amended. Claims 1-4, 8-9 and 12-14 are pending.

Claim Objections

2. Claims 1-4, 8-9 and 14 are objected to because of the following informalities:

Claim 1 has the limitation "said plano-convex lens having an exactly planar surface of zero radius of curvature and a convex surface." However, "zero radius" is an inaccurate description of plano. A radius of infinity more clearly describes a plano lens surface (see Arai patent as an example). The examiner recommends the following language --said plano-convex lens having an exactly planar surface, which is a radius of curvature of infinity, and a convex surface--. The dependent claims inherit the deficiencies of the claims from which they depend.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al., U.S. Patent No. 5,867,308 in view of Arai, U.S. Patent No. 4,666,261.

Regarding claims 1 and 4, Pensel et al. discloses a surgical microscope (figs. 1-3) with a viewing unit (defined by 8, 14, and 18) for viewing an object (O) and defining a viewing beam path (figs. 1-3); an image projection module (2 and 7) for inputting image data into the viewing unit (column 5, lines 26-28), including an image display unit (2) for displaying the image data; said image projection module includes a beam splitter (10) mounted in said viewing beam path; and the imaging optics (7) for projecting the image mounted downstream of said image display unit (2) and being arranged between said image display unit (2) and said beam splitter (10, see fig. 2). Pensel et al. disclose the claimed invention except for the specifics of the imaging optics for projecting the image, i.e., said image projection module including a first and second plano-convex lens, a plano-concave lens, and a concave-convex lens. Arai teaches a projection lens assembly (embodiment 1) with a first (lens 1) and second (lens 3) plano-convex lens, a plano-concave lens (lens 4), and a concave-convex lens (lens 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the projection lens assembly of Arai in the system of Pensel et al. to prevent focal variations due to environmental factors (Arai, column 7, lines 34-39).

Regarding claim 2, Pensel et al. in view of Arai disclose the claimed invention except for the ratio of said first focal length and said second focal length being within a range from 1.9 to 2.5. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have focal lengths within the claimed ratio, since it is been held that discovering an

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optimum value of a result effective variable involves only routine skill in the art. One would have been motivated to adjust the focal lengths for the purpose of adjusting the size/magnification of the projected image. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) See also *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 14, Pensel et al. in view of Arai further disclose said image projection module including a Galileo system comprising a diverging lens (lens 4; negative lens, Arai) and a converging lens (lens 3; positive lens, Arai) so as to permit said image display unit to be optimally coupled into said viewing beam path.

5. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Arai as applied to claim 1, and further in view of Ernstoff et al., U.S. Patent No. 4,090,219.

Regarding claims 8-9, Pensel et al. in view of Arai as applied to claim 1 discloses the claimed invention except for the image display unit including a reflection display driven at a clock frequency and illuminated sequentially with different colors as a function of time; wherein said image display unit includes a rotatably mounted filter wheel for illuminating said reflection display; and a device for synchronizing the rotation of said filter wheel to said clock frequency of said reflection display. Ernstoff et al. teaches in fig. 8, a reflection display (310, column 2, lines 57-58) driven at a clock frequency (column 8, lines 65-66) and illuminated sequentially with different colors as a function of time (column 8, lines 51-56); wherein said image display unit includes a rotatably mounted filter wheel (302; Ernstoff) for illuminating said reflection display (fig. 8; Ernstoff); and a device for synchronizing the rotation of said filter wheel to said clock

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frequency of said reflection display (322 and 306; Ernstoff). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reflection display of Ernstoff et al. as the display means in the system of Pensel et al. in view of Arai to provide high resolution and high brightness full color images (Ernstoff, column 2, lines 24-26).

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pensel et al. in view of Ernstoff et al.

Pensel et al. discloses a surgical microscope (figs. 1-3) with a viewing unit (defined by 8, 14, and 18) for viewing an object (O) and defining a viewing beam path (figs. 1-3); an image projection module (2 and 7) for inputting image data into the viewing unit (column 5, lines 26-28), including an image display unit (2) for displaying the image data; an image recording module (19 and 26) for recording an image of said object supplied by said viewing unit including an image sensor (26) mounted to receive said image data from said image projection module; and a recording device (19) connected to said image sensor for recording said image data and said image of said object.

Pensel et al. discloses the claimed invention except for an optical device mounted in said viewing beam path for providing an image of said object to a location outside of said viewing beam path; an image recording beam splitter for directing said image of the object onto said image sensor; the image recording beam splitter mounted outside of said viewing beam path for directing said image of the object onto said image sensor; and the image display unit including a reflection display and wherein a time-dependent sequential illumination of the reflection display

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with only a single color is improved so that the brightness of said image display unit is increased compared to a display exposed to sequential RGB illumination.

Official Notice is taken that beam splitters are well known in the art for redirecting portions of light into different beam paths. It would have been obvious to one of ordinary skill in the art at the time the invention was made to insert a beam splitter as the optical device into the viewing beam path to provide a image of the object to a location outside of said viewing beam path in order for another viewer to see the object. Further it would have been obvious to one of ordinary skill in the art at the time the invention was made to insert a beam splitter (making it the image recording beam splitter) outside the viewing path in order for another viewer to see the combined image that will be received by the image sensor. It is noted as directed by the MPEP 2144.03 that if the applicant does not seasonably traverse the well-known statement during examination, then the object of the well-known statement is taken to be admitted prior art. *In re Chevenard*, 139 F.2d 71, 60 USPQ 239 (CCPA 1943). As such, the official notice statements of the examiner are now held to be admitted prior art.

Ernststoff et al. teaches in fig. 8, a reflection display (310, column 2, lines 57-58) illuminated sequentially with a single color as a function of time (in so far as the wheel can be stopped on a single color and, inherently, if more time is spent on a single color, it will be brighter than compared to a display exposed to sequential RGB illumination). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the reflection display of Ernststoff et al. as the display means in the system of Pensel et al. to be able to provide high resolution and high brightness full color images (Ernststoff, column 2, lines 24-26).

Response to Arguments

7. Applicant's arguments with respect to claims 1-4, 8-9 and 12-14 have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments filed 28 April 2004 have been fully considered but they are not persuasive.

Applicant argues that Ernstoff does not disclose sequential illumination but only continuous. The examiner respectfully disagrees. Merriam-Websters Collegiate Dictionary Tenth Edition states that a sequence is "a continuous or connected series." Therefore, Ernstoff is a still a sequence when stopped on green; it is a continuous series of green over time. Further, applicants own disclosure on page 4, lines 6-11 states that the sequential GGG illumination is "illumination exclusive, for example, ... via the green filter" which is the green filter of the stated RGB system, demonstrating that applicant considers one filter being used over time to be sequential illumination.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF
September 7, 2004


MARK A. ROBINSON
PRIMARY EXAMINER